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<b>A61P 1/04</b>	A61P 1/04	
<b>A61P 3/06</b>	A61P 3/06	
	審査請求 未請求 予備審査請求 有 (全 61 頁) 最終頁に続く	

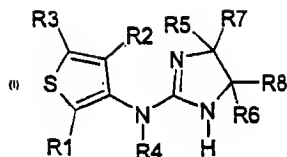
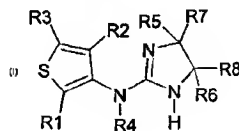
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 (33) 優先権主張国 ドイツ (DE)

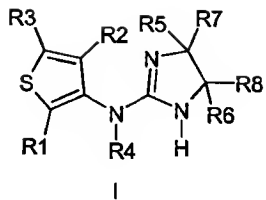
(71) 出願人 397056695  
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 弁理士 三輪 昭次

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(54) 【発明の名称】 置換チオフェン、その製造方法、医薬または診断薬としてのその使用、および、これを含有する  
 医薬

(57)





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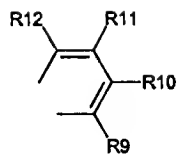
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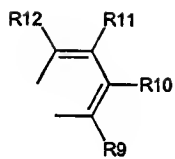
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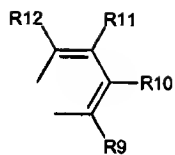
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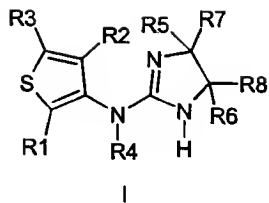
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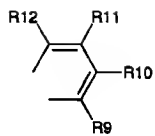
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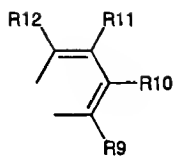


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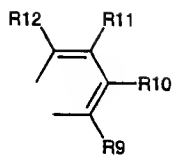
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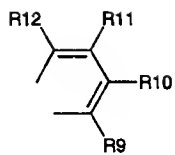
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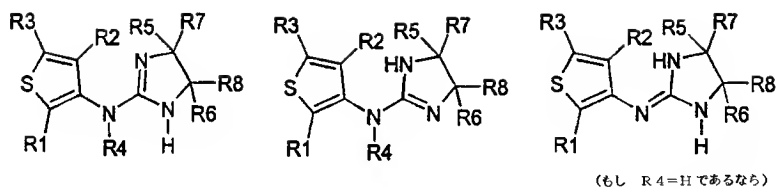
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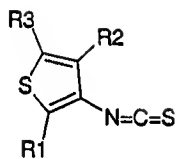


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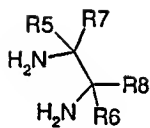
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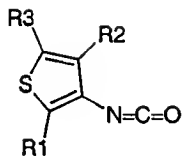
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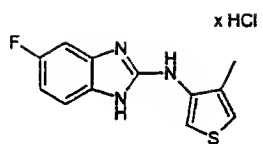
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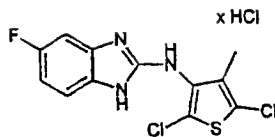
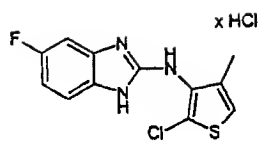
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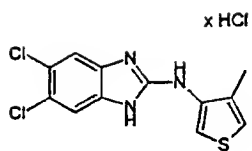
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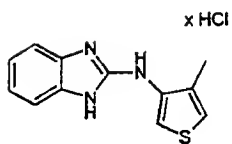
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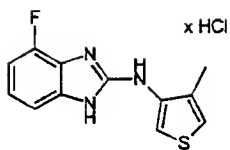
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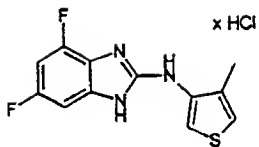
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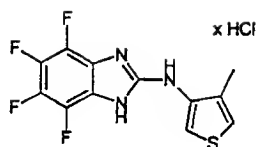


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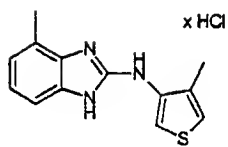
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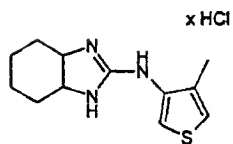


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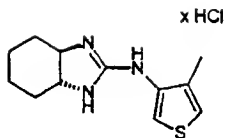
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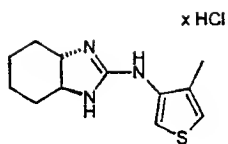
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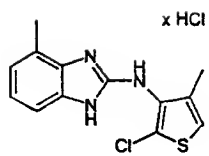


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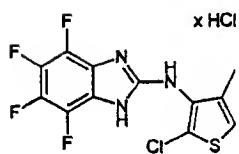
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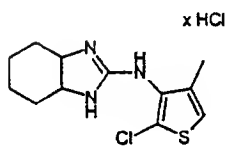


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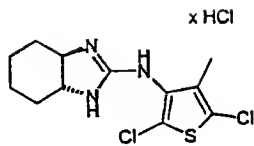
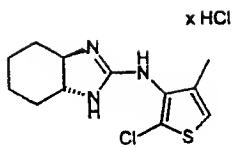
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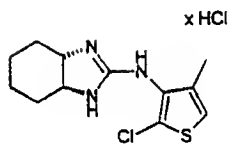
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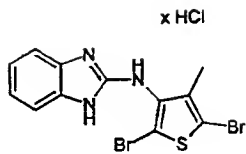
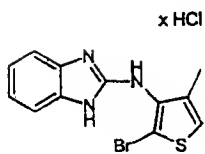
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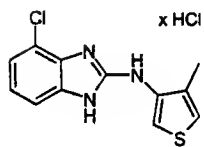
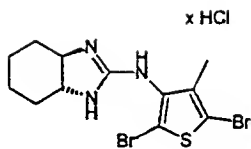
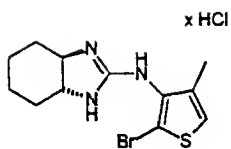
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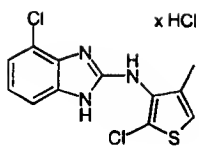
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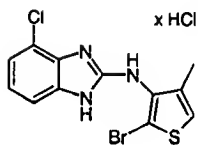
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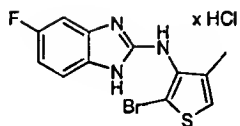




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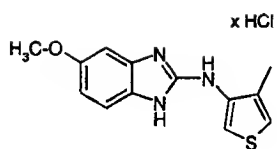
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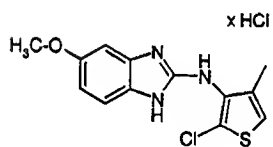
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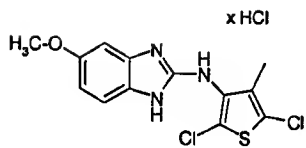
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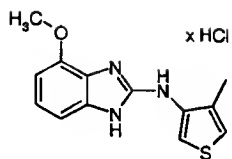
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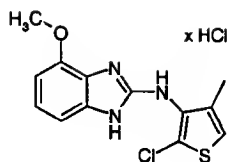
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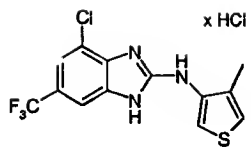
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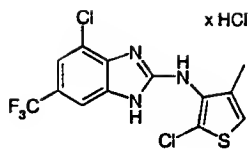
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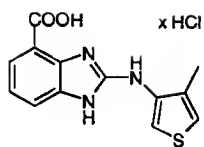
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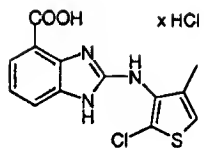
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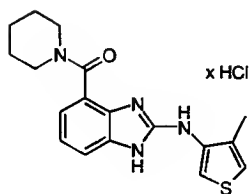
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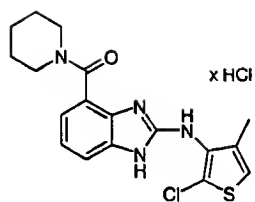


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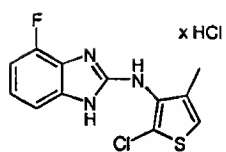
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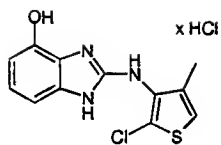
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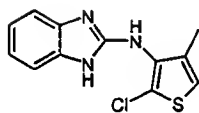
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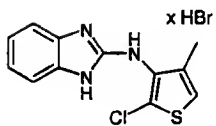
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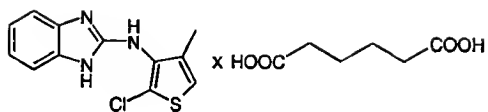
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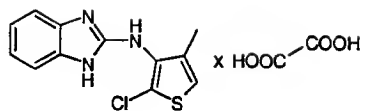


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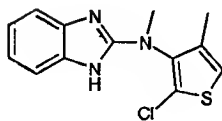
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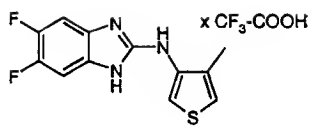
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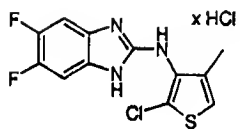
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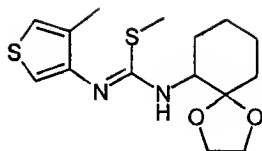


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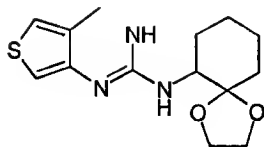
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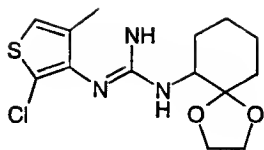
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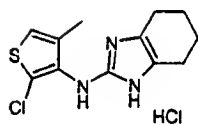
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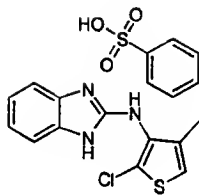
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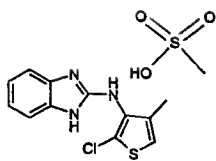


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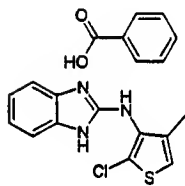


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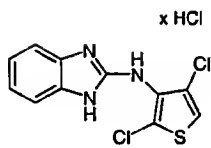
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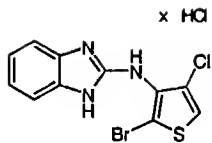
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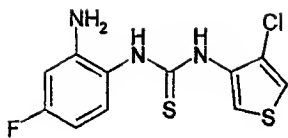
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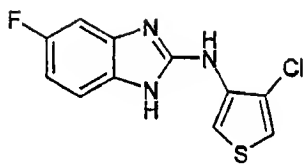


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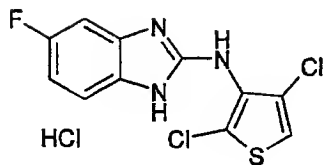
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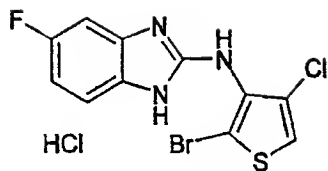
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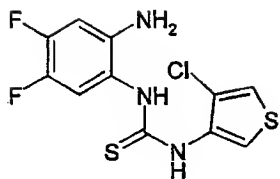
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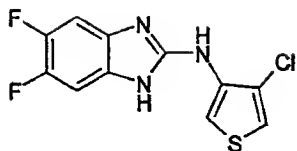
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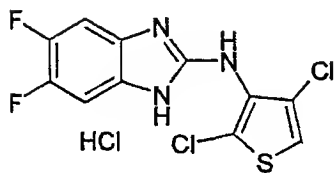
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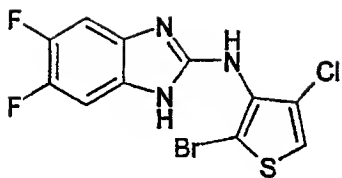


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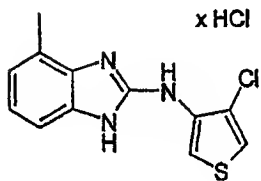


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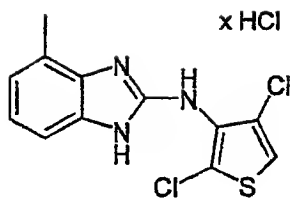
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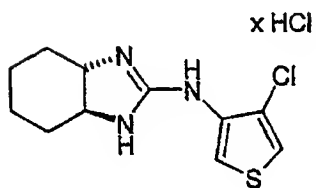
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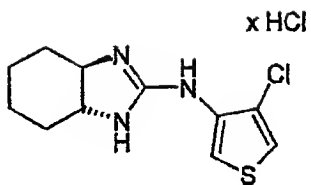
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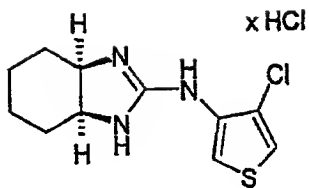
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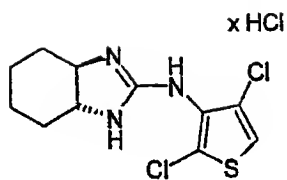
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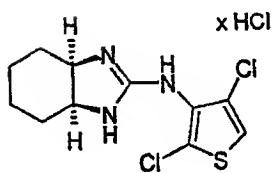


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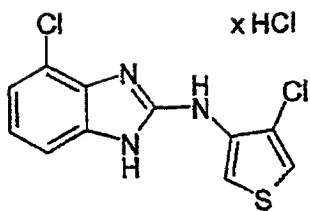
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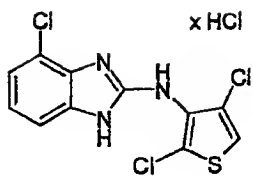
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実施例	IC <sub>50</sub> [ $\mu$ M]
16 トランス-R, R-2-クロロ-3N- (3a, 4, 5, 6, 7, 7a-ヘキサヒドロ-1H-2-ベンズイミダゾリル) -4-メチル-3-チエニルアミン塩酸塩	0.27 (rNHE3)
12 2-クロロ-3N- (2-ベンズイミダゾリル) -4-メチル-3-チエニルアミン塩酸塩	0.12 (rNHE3)
54 2-ブロモ-4-クロロ-3N- (2-ベンズイミダゾリルアミノ) チオフェン塩酸塩	0.22 (hNHE3)
53 2, 4-ジクロロ-3N- (2-ベンズイミダゾリルアミノ) チオフェン塩酸塩	0.14 (hNHE3)
56 2, 4-ジクロロ-3N- (4-メチル-2-ベンズイミダゾリルアミノ) チオフェン塩酸塩	0.22 (hNHE3)
60 トランス-R, R-2, 4-ジクロロ-3N- (3a, 4, 5, 6, 7, 7a-ヘキサヒドロ-1H-2-ベンズイミダゾリル) -3-チエニルアミン塩酸塩	0.19 (hNHE3)
63 2, 4-ジクロロ-3N- (4-クロロ-2-ベンズイミダゾリルアミノ) チオフェン塩酸塩	0.54 (hNHE3)
38 2-クロロ-3N- (4-ヒドロキシ-2-ベンズイミダゾリルアミノ) -4-メチルチオフェン塩酸塩	0.84 (hNHE3)
18 2-ブロモ-3N- (2-ベンズイミダゾリル) -4-メチル-3-チエニルアミン塩酸塩	0.12 (hNHE3)
19 トランス-R, R-2-ブロモ-3N- (3a, 4, 5, 6, 7, 7a-ヘキサヒドロ-1H-2-ベンズイミダゾリル) -4-メチル-3-チエニルアミン塩酸塩	0.56 (hNHE3)
2 2-クロロ-3N- (5-フルオロ-2-ベンズイミダゾリル) -4-メチル-3-チエニルアミン塩酸塩	0.62 (hNHE3)
44 (1H-ベンズイミダゾール-2-イル) - (2-クロロ-4-メチルチオフェン-3-イル) -メチルアミン	1.59 (hNHE3)

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## INTERNATIONAL SEARCH REPORT

 Int. and Application No.  
 PCT/EP 03/05465

 A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 C07D409/12 A61K31/4168 A61P11/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search laws used)

EPO-Internal, WPI Data, PAJ, BIOSIS, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 758 476 A (LINDNER E ET AL) 11 September 1973 (1973-09-11) cited in the application column 1, line 30 - line 46; examples 1,4B,7	1-13

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another claim or other special reason (as specified)

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

9 September 2003

Date of mailing of the international search report

19/09/2003

Name and mailing address of the ISA

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 Tel (+31-70) 340-2000, Tx: 31 697 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Härtinger, S

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International Application No.

PCT/EP 03/05465

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## INTERNATIONALER RECHERCHENBERICHT

Internationales Abkürzungen

PCT/EP 03/05465

<b>A. KLASSIFIZIERUNG DES ANMELDUNGSGEGENSTANDES</b> IPK 7 C07D4C9/12 A61K31/4168 A61P11/00		
Nach der internationalen Patentklassifikation (IPK) oder nach der nationalen Klassifikation und der IPK		
<b>B. RECHERCHIERTE GEBIETE</b> Rechercharter Mindestumfang (Klassifikationssystem und Klassifikationszeichen) IPK 7 C07D A61K A61P		
Rechercherte aber nicht zum Mindestumfang gehörende Veröffentlichungen, soweit diese unter die recherchierten Gebiete fallen		
Während der internationalen Recherche konsultierte elektronische Datenbank (Name der Datenbank und evtl. verwendete Suchbegriffe) EPO-Internal, WPI Data, PAJ, BIOSIS, BEILSTEIN Data, CHEM ABS Data		
<b>C. ALS WESENTLICH ANGESEHENE UNTERLAGEN</b>		
Kategorie*	Bezeichnung der Veröffentlichung, soweit erforderlich unter Angabe der in Betracht kommenden Teile	Beitrag, Anspruch Nr.
A	US 3 758 476 A (LINDNER E ET AL) 11. September 1973 (1973-09-11) in der Anmeldung erwähnt Spalte 1, Zeile 30 - Zeile 46; Beispiele 1,48,7	1-13
<input type="checkbox"/> Weitere Veröffentlichungen sind die Fortsetzung von Feld C zu entnehmen		
<input checked="" type="checkbox"/> Siehe Anhang Patentteile		
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Datum des Abschlusses der internationalen Recherche		
Abschlusstermin des internationalen Rechercheberichts		
9. September 2003		
19/09/2003		
Name und Postanschrift der internationalen Recherchebehörde Europäisches Patentamt, P.O. Box 5010 Patentamt 2 NL-2000 HA The Hague Tel. (+31-70) 340-2040, Fax 31 651 epo nl Fax (+31-70) 340-3010		
Bevollmächtigter Beauftragter Härtinger, S		

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 PCT/EP 03/05465

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(51)Int.Cl.<sup>7</sup>

3/10	3/10
9/04	9/04
9/06	9/06
9/10	9/10
9/12	9/10
11/00	9/12
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13/12	13/08
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25/08	25/00
25/22	25/08
25/24	25/22
29/00	25/24
33/00	29/00
33/06	33/00
35/00	33/06
39/02	35/00
43/00	39/02
	43/00

(81) AP(GH,GM,KE,LS,MW,MZ,SD,SL,SZ,TZ,UG,ZM,ZW),EA(AM,AZ,BY,KG,KZ,MD,RU,TJ,TM),EP(AT, BE,BG,CH,CY,CZ,DE,DK,EE,ES,FI,FR,GB,GR,HU,IE,IT,LU,MC,NL,PT,RO,SE,SI,SK,TR),OA(BF,BJ,CF,CG,CI,CM,GA, GN,GQ,CW,ML,MR,NE,SN,TD,TG),AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CO,CR,CU,CZ,DE,DK,DM,DZ, EC,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KP,KR,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MC,MK,MN,M W,MX,MZ,NI,NO,NZ,OM,PH,PL,PT,RO,RU,SC,SD,SE,SG,SK,SL,TJ,TM,TN,TR,TT,TZ,UA,UG,UZ,VC,VN,YU,ZA,ZM,ZW

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( ) 4C063 AA01 BB09 CC92 DD26 EE01  
 4C086 AA01 AA02 AA03 BC39 GA04 GA07 MA01 MA04 NA14 ZA01  
 ZA05 ZA06 ZA12 ZA36 ZA37 ZA42 ZA45 ZA54 ZA59 ZA68  
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